<u>IN THE CLAIMS</u>:

The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims:

Claim 1. (currently amended): An information processing device, comprising:

an image-capturing unit constructed to capture a real object in real space into a taken image;

a position and orientation unit constructed to estimate a position and orientation of ~~the~~ <u>said</u> image-capturing unit;

a constraining shape input unit constructed to specify three-dimensional coordinates respectively of points on a constraining plane to indicate at the same time the shape and position of the constraining plane in ~~said~~ <u>the</u> real space;

a constraining shape generation unit constructed to generate a triangular patch from three points sequentially input by ~~the~~ <u>said</u> constraining shape input unit and to generate a constraining shape based on at least ~~one said~~ <u>the</u> constraining plane;

a virtual image generation unit constructed to generate a virtual image of a virtual object with respect to the position and orientation of said image capturing unit;

a synthesizing unit constructed to synthesize the virtual image generated by said virtual image generation unit with the taken image generated by said image-capturing unit;

a virtual object operating unit constructed to perform six-degree-of-freedom operations of ~~said~~ <u>the</u> virtual object;

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an operation aiding unit constructed to generate restrictions on the operations performed by said virtual object operating unit based on ~~said~~ the constraining shape generated by said constraining shape generating unit; and

a display unit constructed to translucently display the triangular patch generated by said constraining shape generation unit.

Claim 2. (canceled)

Claim 3. (previously presented): An information processing device according to Claim 1, wherein said operating aiding unit performs at least one of the following operations in performing an operation controlling the position and orientation of the virtual object:

a translation operation for causing translational movement of the virtual object based on the constraining shape; and/or

a rotation operation for rotating the virtual object on an axis which is a normal vector at a plane where the constraining shape and the virtual object come into contact.

Claims 4.-19. (canceled).